

Amendments to the Claims

Please cancel claims 20-49 and 51-52. Please amend claim 50 and add claim 53. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing:

1-49. (canceled)

50. (currently amended) A method for immunizing a human against pertussis comprising administering an effective amount of a vaccine ~~selected from the group consisting of the vaccine of claim 37 and the vaccine of claim 38~~ comprising a therapeutically effective quantity of a polypeptide comprising the S1, S2, S3, S4 and S5 subunits of pertussis toxin having the same arrangement and configuration as that present in the natural pertussis toxin, wherein said S1 subunit is modified by the substitution of glutamic acid at position 129 with glycine and the substitution of arginine at position 9 with another natural amino acid.

51-52. (canceled)

53. (new) The method of claim 50, wherein said other natural amino acid substituted at position 9 is glycine.